

IN THE CLAIMS

Per the revised amendment practice, a complete listing of all claims in the application follows.

Claims 1-34 (Canceled).

35. (original) A method of providing a chemical vapor deposition environment, the method comprising:

- introducing a deposition gas to a chamber; and
- introducing an inert gas to said chamber.

36. (original) The method of claim 35 further comprising a step of forming a plasma comprising said deposition gas and said inert gas.

37. (original) An atmosphere for a chemical vapor deposition process, comprising:

- a deposition gas having a pressure contribution and a chemical reactivity; and
- a chemically inert gas mixed with said deposition gas, limiting said pressure contribution of said deposition gas, and increasing said chemical reactivity of said deposition gas.

38. (original) The atmosphere of claim 37 wherein said deposition gas is a film precursor deposition gas.

39. (original) The atmosphere of claim 37 wherein said deposition gas is a metal film precursor deposition gas.

40. (original) A plasma, comprising:

- a reactive species of a precursor gas; and
- a reactive species of an inert reaction promoting gas intermixed with said precursor gas.

41. (original) The plasma in claim 40, further comprising a reactive species of a reactant gas, wherein said collider gas represents a volume of at least 4/10 of a volume represented by said reactant gas.

42. (original) A method of supporting a reaction between a precursor gas and a reactive gas, comprising:

introducing a chemically inert reaction-promoter gas to said precursor gas; and
ionizing said reaction-promoter gas.

43. (original) The method in claim 42, further comprising a step of forming a reactive species of a constituent of said precursor gas with an ion from said reaction-promoter gas.

44. (original) The method in claim 43, wherein:

said step of introducing a chemically inert reaction-promoter gas comprises
introducing said chemically inert reaction-promoter gas to a precursor gas
comprising TiCl_4 ; and
said step of forming a reactive species comprises forming TiCl_3^+ .

45. (original) The method in claim 43, wherein

said step of introducing a chemically inert reaction-promoter gas comprises
introducing said chemically inert reaction-promoter gas to a precursor gas
comprising TiCl_3^+ ; and
said step of forming a reactive species comprises forming TiCl_2^{++} from said
 TiCl_3^+ .

46. (original) A method of encouraging a formation of a reactive species of a gas, comprising:

providing a chemically non-reactive ionization agent;
ionizing said agent; and
allowing a collision between an ion of said agent and a constituent of said gas.

47. (original) The method in claim 46, wherein said step of providing a chemically non-reactive ionization agent comprises providing an agent that is chemically non-reactive with respect to said gas.

48. (original) The method in claim 46, wherein said step of providing a chemically non-reactive ionization agent comprises providing an agent that is generally chemically non-reactive.

49. (original) The method in claim 48, wherein said step of providing a chemically non-reactive ionization agent comprises providing an inert gas.

50. (original) The method in claim 49, wherein said step of providing a chemically non-reactive ionization agent comprises providing a noble gas.

51. (original) A method of advancing a reaction between a first constituent of a first gas and a second constituent of a second gas, wherein said first gas and said second gas contribute to a total pressure within a chamber, and said method comprising:
contributing to said total pressure with a third gas; and
collidingly fostering said reaction using said third gas.

52. (original) The method in claim 51, wherein said step of collidingly fostering said reaction comprises:
creating a reactive species of said first constituent using said third gas; and
allowing said reactive species to chemically interact with said second gas.

53. (original) The method in claim 52, further comprising a step of allowing said reactive species to chemically interact with said third gas.

54. (original) A method of aiding a reaction involving a metal-containing gas that provides a partial pressure contribution within a chamber, comprising:
limiting said partial pressure contribution of said metal-containing gas with an
addition to said chamber of a selection from a group consisting of:

a generally inert gas;
a gas that is inert with respect to said reaction;
a chemically reactive gas; and
combinations thereof; and
encouraging a formation of an ion from said metal-containing gas using said
selection.

55. (original) A method of plasma etching a material, comprising:

providing a gas;
providing a charged species promoter;
ionizing said gas with RF energy;
ionizing said charged species promoter with RF energy;
ionizing said gas with said charged species promoter; and
allowing an ion from said gas to chemically react with said material.

56. (original) A method of forming a film on a substrate, comprising:

sputtering a material from a target toward said substrate;
introducing a gas having a reactivity to said material; and
promoting said reactivity using an inert reaction fostering agent.

57. (original) A method of chemically reacting a first gas and a material, comprising:

introducing an inert gas to said first gas;
generating a reactive species from said first gas;
generating a non-reactive species from said inert gas;
further generating a reactive species from said first gas using said non-reactive
species; and
introducing said reactive species to said material.

58. (original) The method in claim 57, wherein said step of introducing said reactive species to
said material comprises introducing said reactive species to a material being sputtered.

59. (original) The method in claim 57, wherein said step of introducing said reactive species to said material comprises introducing said reactive species to a material on a substrate.

60. (original) The method in claim 59, wherein said step of introducing said reactive species to said material comprises introducing said reactive species to a reactive species of a second gas adsorbed onto said substrate.

61. (original) A method of operating a PECVD system configured to operate in a first mode under a set of parameters and free of a reaction-promoter agent, said method comprising:

running a second mode of said PECVD system, comprising:

providing a precursor gas to a chamber;

providing a reactant gas to said chamber;

providing an inert reaction-promoter gas to said chamber;

generating a plasma from said precursor gas, said reactant gas, and said inert reaction-promoter gas;

contacting a substrate in said chamber with a precursor reactive species and a reactant reactive species;

forming a film on said substrate through a reaction of said precursor reactive species and said reactant reactive species, wherein said film has a uniformity, and wherein said reaction defines a reaction rate.

62. (original) The method in claim 61, wherein said step of forming a film comprises forming a film under said set of parameters, wherein said film has a uniformity better than a uniformity in said first mode.

63. (original) The method in claim 62, wherein said step of forming a film comprises forming a film having a uniformity of at most 5%.

64. (original) The method in claim 61, wherein said step of forming a film on said substrate through a reaction comprises forming a film under said set of parameters, wherein said reaction defines a reaction rate greater than a reaction rate in said first mode.

65. (original) The method in claim 64, wherein said step of forming a film on said substrate through a reaction comprises forming a film at a reaction rate ranging from about 4 to about 10 angstroms per second.

66. (original) The method in claim 61, wherein said step of providing an inert reaction-promoter gas comprises establishing a percentage of said inert reaction-promoter gas to said reactant gas in said chamber of at least 40%.